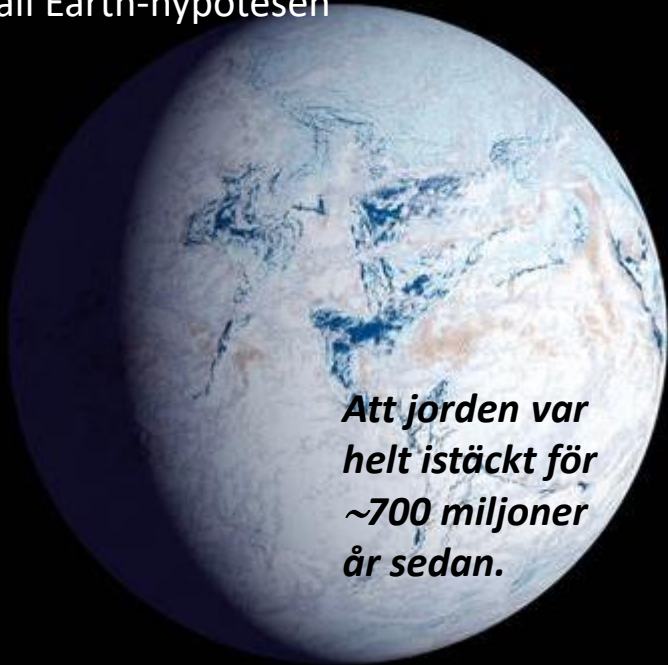


# Snowball Earth-hypotesen



***Att jorden var  
helt istäckt för  
~700 miljoner  
år sedan.***

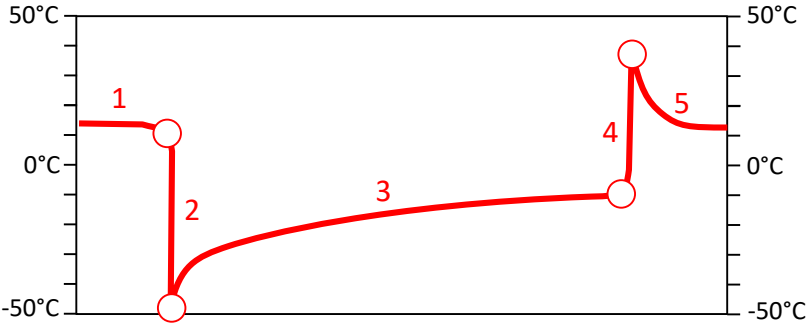
VISIT...

LANZAROTE  
*Caliente*.COM



Kan Snowball Earth hända igen?

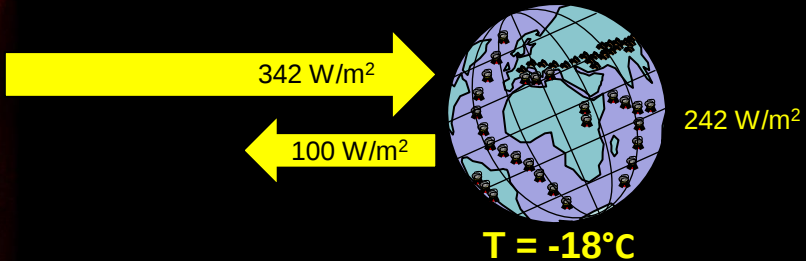
# Kirschvink (1992): Snowball Earth-hypotesen



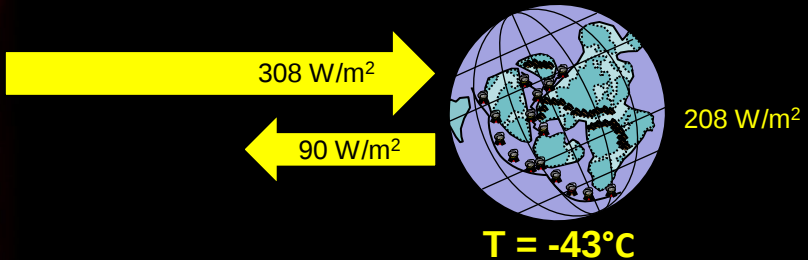
# De geologiska förutsättningar för en Snowball Earth

- 
- Solenergi
  - Albedo
  - Växthuseffekten
  - Kontinentaldrift
  - Bergkedjesbildning

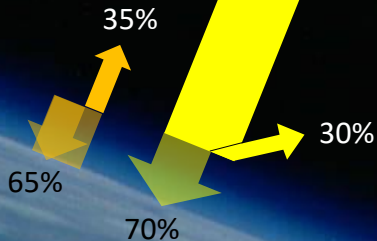
# Solenergi och albedo (Idag)



# Solenergi och albedo (~700 Ma)



# Solenergi och växthuseffekten (Idag)



$$65\% * 242 = 157 \text{ W/m}^2$$

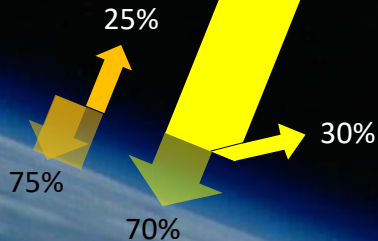
300 ppm CO<sub>2</sub>

**T = 15°C**

Bild: NASA

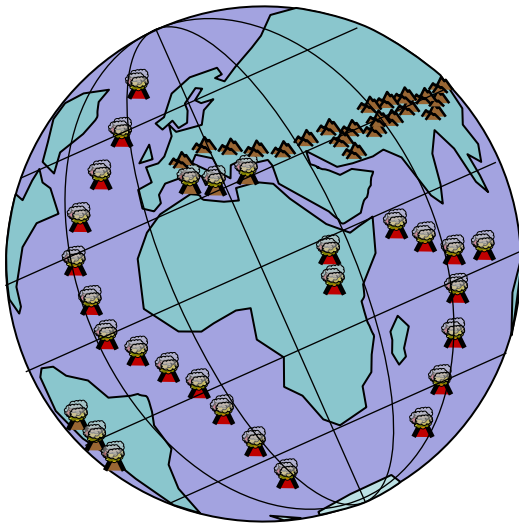


# Solenergi och växthuseffekten (~700 Ma)

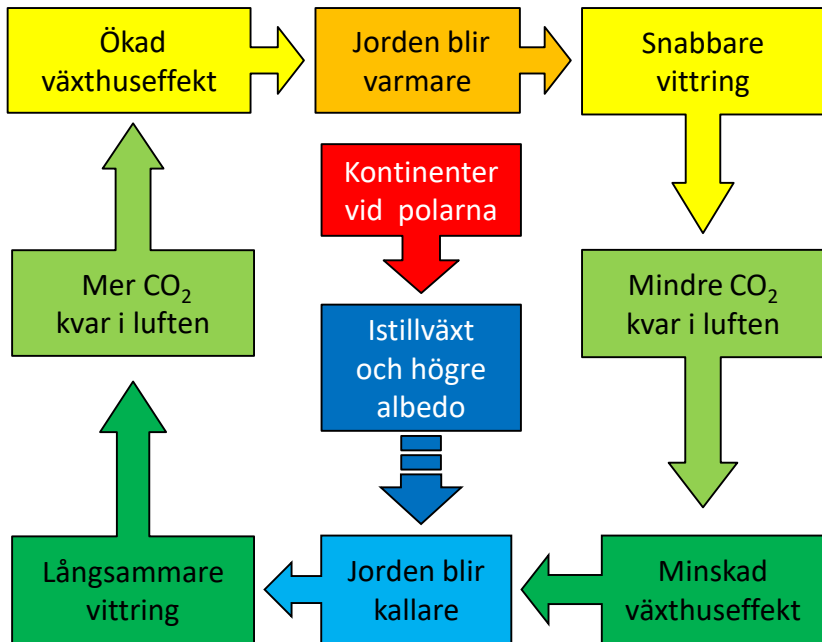


$75\% * 208 = 157 \text{ W/m}^2$   
3000 ppm  $\text{CO}_2$   
**T = 15°C**

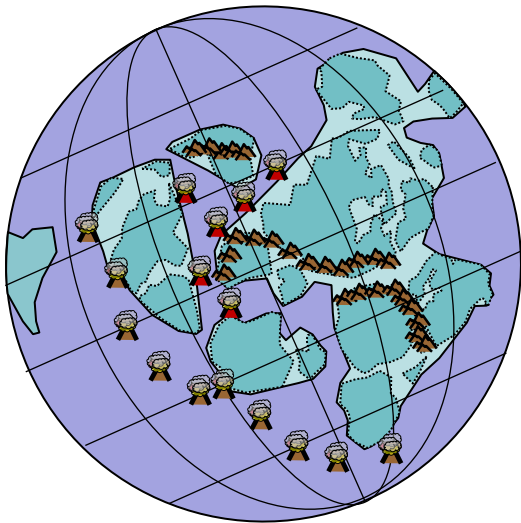
# Kontinentaldrift (Idag)



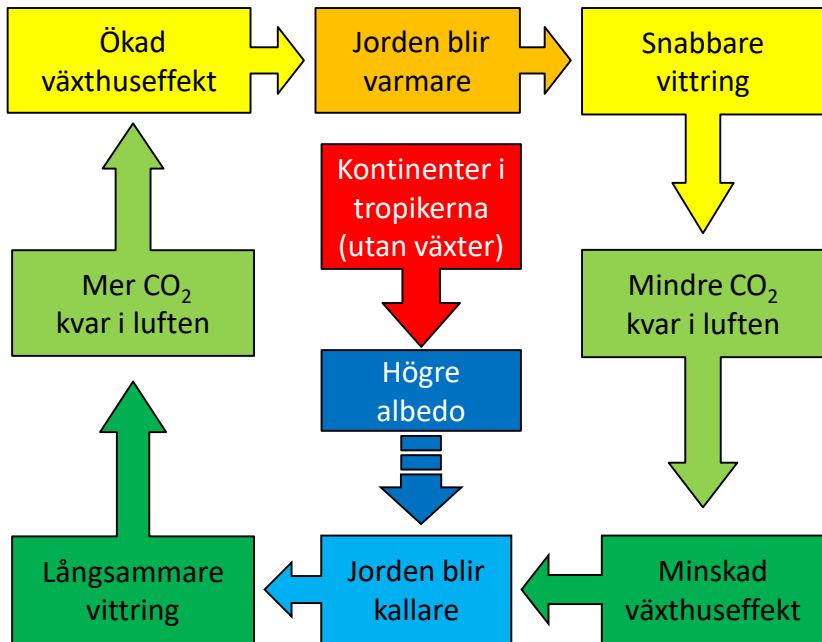
# Kontinentaldrift (~700 Ma)



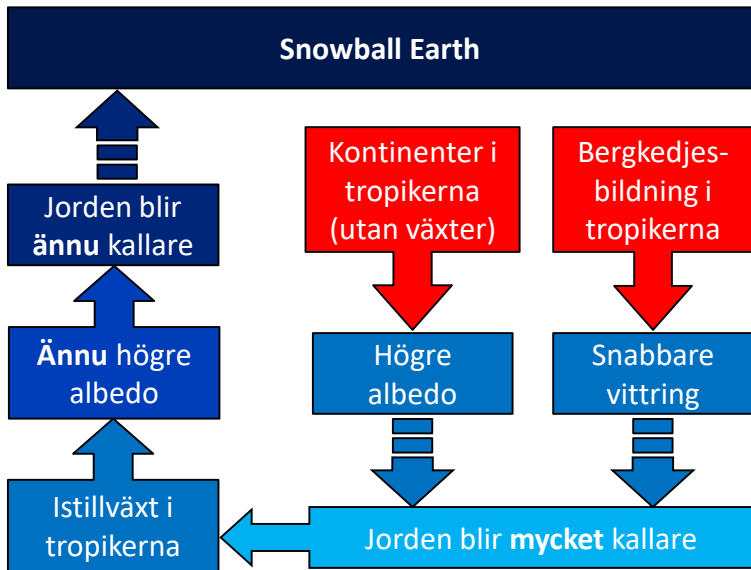
# Kontinentaldrift (~700 Ma)



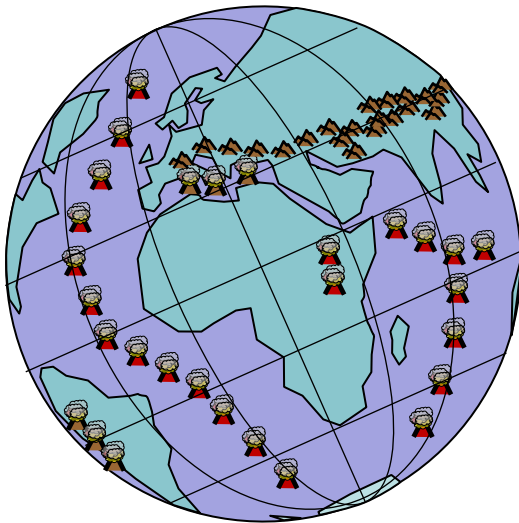
# Kontinentaldrift (~700 Ma)



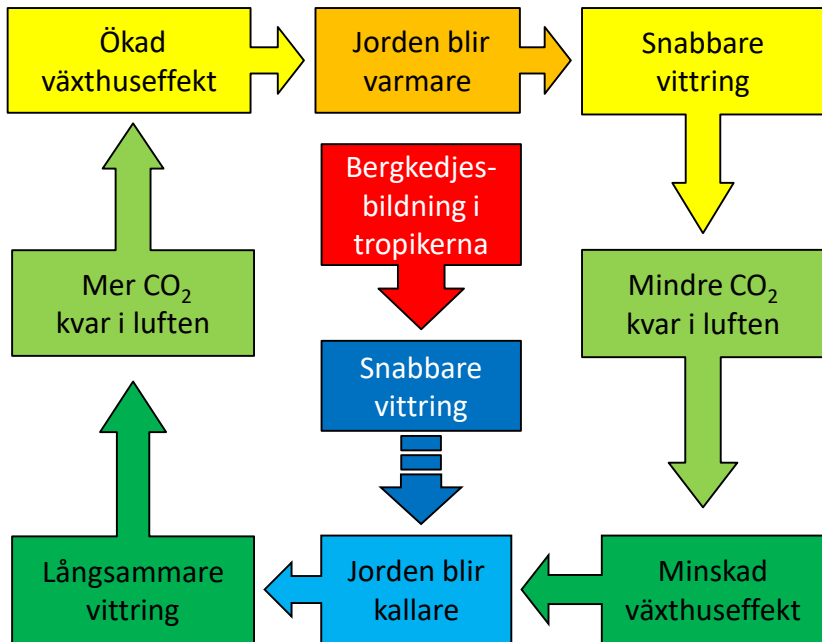
# Kirschvink (1992): Snowball Earth-hypotesen



# Bergkedjesveckning (Idag)

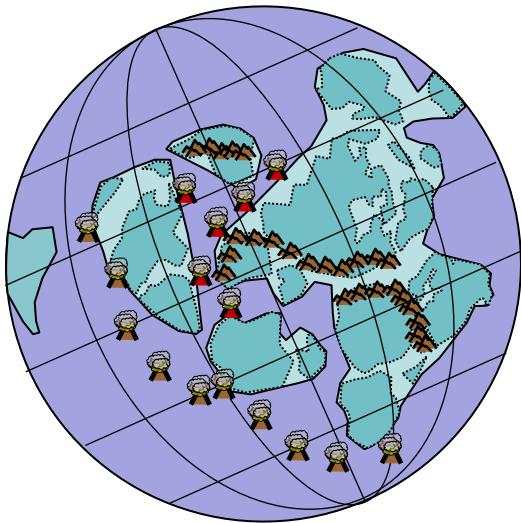


# Bergkedjesbildning (idag)

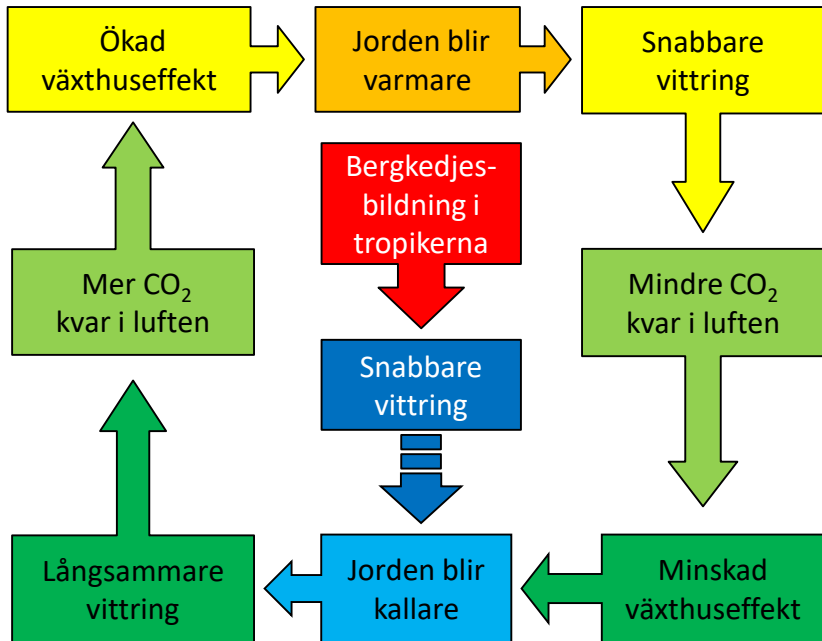




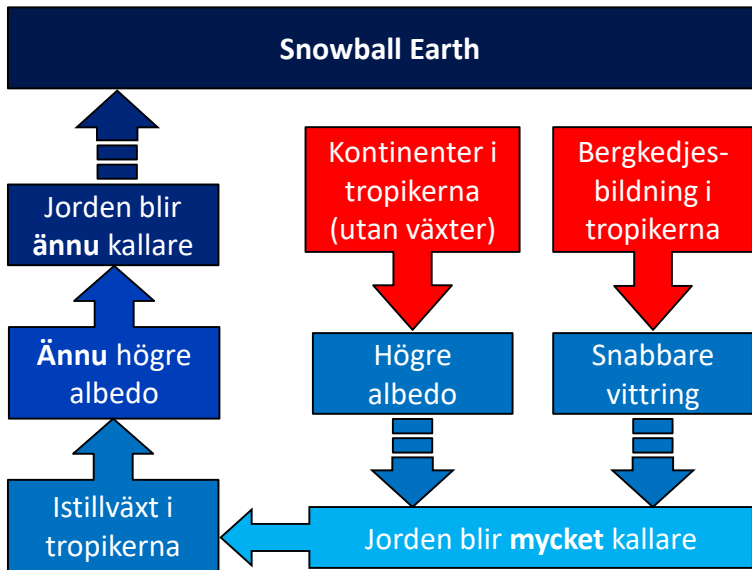
# Bergkedjesveckning (~700 Ma)



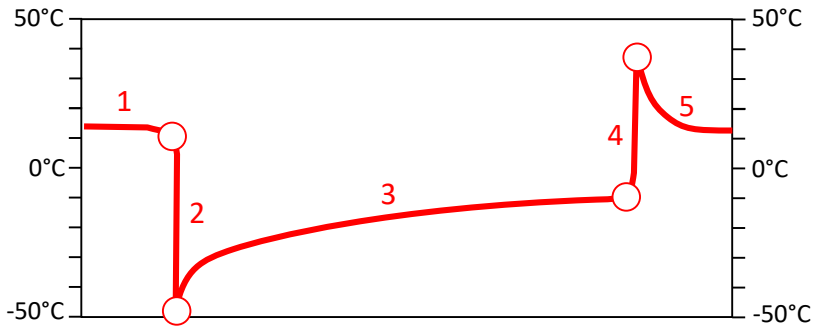
# Bergkedjesbildning (~700 Ma)



# Kan Snowball Earth hända igen?



# Kan Snowball Earth hända igen?





Kan Snowball Earth hända igen?

# Meteoritnedslag



Bild: BBC

# Atomvinter



Bild: National Nuclear Security Administration

# Klimatmanipulering



Bild: [www.geoengineeringwatch.org](http://www.geoengineeringwatch.org)



# Global uppvärming

